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Cotunneling effects in GaAs vertical double quantum dots

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Abstract

We report observation of Coulomb blockade lifting in GaAs vertical double quantum dot caused by cotunneling processes. One characteristic feature of investigated sample is relatively low potential barriers between dots and reservoirs, which makes cotunneling processes favorable. The measurement of current through the sample under variable bias and gate voltages was carried out at temperature of dilution refrigerator 10 mK. Several distinct features, specific to double dot, were observed and appropriate explanation for them was given. © 2011 Pleiades Publishing, Ltd.

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